CLAIMS

What is claimed is:

1   1.   A method for generating a mapping scheme, the method comprising:

2   reading source data definition that includes information about attributes of a source;

3   reading target data definition that includes information about attributes of a target;

4   receiving commands from a user, wherein said commands establish a mapping

5   between one or more attributes of said source and one or more attributes of

6   said target; and

7   based on said commands, automatically generating a mapping scheme that represents

8   said mapping, wherein said mapping includes at least one of

9   multiple attributes of said source mapped to a single attribute of said

10   target; and

11   multiple attributes of said target mapped to a single attribute of said

12   source.

1   2.   The method of claim 1, further comprising using said mapping scheme to create an

2   electronic document with data from said source, wherein the electronic document has a

3   particular format dictated by the target data definition.

1   3.   The method of claim 1, further comprising using said mapping scheme to store, into

2   said target, data from an electronic document, wherein the electronic document has a

3   particular format dictated by the source data definition.

50277-2209

1 4.   The method of claim 1, wherein said mapping scheme further includes instructions on

2 how to collapse a number of attributes of said source into a smaller number of attributes of

3 said target.

1 5.   The method of claim 1, wherein said mapping scheme further includes instructions on

2 how to expand a number of attributes of said source to a greater number of attributes of said

3 target.

1 6.   The method of claim 1, wherein:

2   the step of receiving commands from a user includes receiving user input that

3   specifies a condition, and an action associated with the condition; and

4   the method further comprises the steps of

5   performing an operation that includes converting data, based on said mapping

6   scheme, from the source to a format associated with the target;

7   during performance of said operation, performing the steps of

8   determining whether the condition is satisfied; and

9   if the condition is satisfied, then performing said action.

1 7.   The method of claim 1, wherein:

2   the step of receiving commands from a user includes receiving user input that

3   specifies a specific set of instructions; and

4   the method further comprises the steps of

5   performing an operation that includes converting data, based on said mapping

6   scheme, from the source to a format associated with the target; and

7 during performance of said operation, executing the specific set of instructions

8   to affect said operation.

1 8. The method of claim 1, wherein:

2 the step of receiving commands from a user includes receiving user input that

3 declares a variable to which values can be assigned; and

4 the method further comprises the steps of

5 performing an operation that includes converting data, based on said mapping

6   scheme, from the source to a format associated with the target; and

7 during performance of said operation, using said variable.

1 9. The method of claim 1, wherein:

2 the step of receiving commands from a user includes receiving user input that

3 specifies a precompiled routine; and

4 the method further comprises the steps of

5 performing an operation that includes converting data, based on said mapping

6   scheme, from the source to a format associated with the target; and

7 during performance of said operation, calling said precompiled routine to

8   affect said operation.

1 10. The method of claim 1, wherein:

2 the attributes of said source correspond to a number of hierarchical levels;

3 the attributes of said target correspond to a number of hierarchical levels; and

4 the method further comprises the step of receiving user input that establishes a

5 mapping between one or more hierarchical levels of said source and one or

6 more hierarchical levels of said target.

-29-

1　11.　The method of claim 10, wherein said mapping scheme includes instructions on how

2　to collapse a number of hierarchical levels of said source into a smaller number of

3　hierarchical levels of said target.

1　12.　The method of claim 10, wherein said mapping scheme includes instructions on how

2　to expand a number of hierarchical levels of said source to a greater number of hierarchical

3　levels of said target.

1　13.　The method of claim 1, wherein at least one of the source and the target is a database.

1　14.　The method of claim 1, wherein at least one of the source and the target is an XML

2　document.

1　15.　The method of claim 1, wherein said source is one of a database and an XML

2　document and the target is the other of a database and an XML document.

1　16.　The method of claim 1, wherein the source is a first XML document and the target is

2　a second XML document.

1　17.　A computer-readable medium carrying one or more sequences of instructions which,

2　when executed by one or more processors, causes the one or more processors to perform the

3　method recited in Claim 1.

50277-2209

1   18.   A computer-readable medium carrying one or more sequences of instructions which,

2   when executed by one or more processors, causes the one or more processors to perform the

3   method recited in Claim 2.

1   19.   A computer-readable medium carrying one or more sequences of instructions which,

2   when executed by one or more processors, causes the one or more processors to perform the

3   method recited in Claim 3.

1   20.   A computer-readable medium carrying one or more sequences of instructions which,

2   when executed by one or more processors, causes the one or more processors to perform the

3   method recited in Claim 4.

1   21.   A computer-readable medium carrying one or more sequences of instructions which,

2   when executed by one or more processors, causes the one or more processors to perform the

3   method recited in Claim 5.

1   22.   A computer-readable medium carrying one or more sequences of instructions which,

2   when executed by one or more processors, causes the one or more processors to perform the

3   method recited in Claim 6.

1   23.   A computer-readable medium carrying one or more sequences of instructions which,

2   when executed by one or more processors, causes the one or more processors to perform the

3   method recited in Claim 7.

1   24.   A computer-readable medium carrying one or more sequences of instructions which,

2   when executed by one or more processors, causes the one or more processors to perform the

3   method recited in Claim 8.

50277-2209

1   25.   A computer-readable medium carrying one or more sequences of instructions which,

2   when executed by one or more processors, causes the one or more processors to perform the

3   method recited in Claim 9.

1   26.   A computer-readable medium carrying one or more sequences of instructions which,

2   when executed by one or more processors, causes the one or more processors to perform the

3   method recited in Claim 10.

1   27.   A computer-readable medium carrying one or more sequences of instructions which,

2   when executed by one or more processors, causes the one or more processors to perform the

3   method recited in Claim 11.

1   28.   A computer-readable medium carrying one or more sequences of instructions which,

2   when executed by one or more processors, causes the one or more processors to perform the

3   method recited in Claim 12.

1   29.   A computer-readable medium carrying one or more sequences of instructions which,

2   when executed by one or more processors, causes the one or more processors to perform the

3   method recited in Claim 13.

1   30.   A computer-readable medium carrying one or more sequences of instructions which,

2   when executed by one or more processors, causes the one or more processors to perform the

3   method recited in Claim 14.

1   31.   A computer-readable medium carrying one or more sequences of instructions which,

2   when executed by one or more processors, causes the one or more processors to perform the

3   method recited in Claim 15.

1   32.   A computer-readable medium carrying one or more sequences of instructions which,

2   when executed by one or more processors, causes the one or more processors to perform the

3   method recited in Claim 16.

50277-2209